CLAIMS AS CURRENTLY AMENDED

1.   (canceled)

2.   (canceled)

3.   (currently amended) ~~The transmitter of claim 2,~~
~~wherein:~~ A transmitter for transmitting a transmit signal
having a transmit frequency within a transmit frequency
band, comprising:
        a high-low signal generator for generating an LO
signal having an LO frequency lower than said transmit
frequency band when said transmit frequency is in a lower
part of said transmit frequency band and an LO frequency
greater than said transmit frequency when said transmit
frequency is in an upper part of said transmit frequency
band;
        an upconverter for using said LO signal for
frequency upconverting an intermediate frequency (IF) signal
to said transmit signal; and
        a digital to analog converter (DAC) using a
sampling clock signal having a sampling clock frequency for
converting a digital signal to said IF signal, said IF
signal having an IF frequency band having IF channel
frequencies corresponding to transmit channel frequencies in
said lower part of said transmit frequency band and having
the same said IF channel frequencies corresponding to
different transmit channel frequencies in said upper part of
said transmit frequency band; wherein:
        said sampling frequency is about equal to a sum of
a fraction of the width of said transmit frequency band plus
a lower IF frequency times a sum of one plus a ratio of an
alias frequency to an upper IF frequency, said lower IF

frequency and said upper IF frequency bounding said IF
frequency band and said alias frequency at said sampling
clock frequency minus said upper IF frequency.

2 4. (original) The transmitter of claim 3, wherein:
        said fraction is at least one-half and less than
one.

3 5. (original) The transmitter of claim 3, wherein:
        said fraction is about one-half.

4 6. (original) The transmitter of claim 3, further
comprising:
        a digital signal processor for receiving transmit
information and issuing a DSP signal carrying said transmit
information;
        a channel select IFLO generator for generating an
IFLO signal having an IFLO frequency controlled according to
a desired one of said transmit channel frequencies;
        a digital multiplier using said IFLO signal for
converting said DSP signal to said digital signal; and
        an IF filter coupled to the DAC for passing said
IF signal to said upconverter and suppressing said alias
signal.

7. (canceled)

8. (canceled)

5 9. (currently amended) ~~The method of claim 8, wherein:~~ A
method for transmitting a transmit signal having a transmit
frequency within a transmit frequency band, comprising:
        generating an LO signal having an LO frequency
lower than said transmit frequency band when said transmit

frequency is in a lower part of said transmit frequency band and an LO frequency greater than said transmit frequency when said transmit frequency is in an upper part of said transmit frequency band;

using said LO signal for frequency upconverting an intermediate frequency (IF) signal to said transmit signal; and

converting a digital signal to said IF signal using a sampling clock signal having a sampling clock frequency, said IF signal having an IF frequency band having IF channel frequencies corresponding to transmit channel frequencies in said lower part of said transmit frequency band and having the same said IF channel frequencies corresponding to different transmit channel frequencies in said upper part of said transmit frequency band; wherein:

said sampling frequency is about equal to a sum of a fraction of the width of said transmit frequency band plus a lower IF frequency times a sum of one plus a ratio of an alias frequency to an upper IF frequency, said lower IF frequency and said upper IF frequency bounding said IF frequency band and said alias frequency at said sampling clock frequency minus said upper IF frequency.

10. (original) The method of claim 9, wherein:
said fraction is at least one-half and less than one.

11. (original) The method of claim 9, wherein:
said fraction is about one-half.

12. (original) The method of claim 9, further comprising:
generating a DSP signal carrying transmit information;

generating an IFLO signal having an IFLO frequency controlled according to a desired one of said transmit channel frequencies;

using said IFLO signal for converting said DSP signal to said digital signal; and

passing said IF signal for upconversion by said LO signal while suppressing said alias signal.